

# Urinary incontinence in women: A medical problem that remains relevant today – a review of the literature<sup>1</sup>

<https://doi.org/10.34766/9tbfyj55>

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**Received:** 10 July 2026 | **Revised:** 25 August 2026 | **Accepted:** 26 August 2026 | **Published:** 22 September 2026

**Abstract:** Urinary incontinence is a common condition in women and is not a physiological consequence of ageing, pregnancy or childbirth. Although it is not usually life-threatening, it can significantly limit daily activities, occupational and social functioning, intimate relationships and mental well-being. The aim of this non-systematic review of the literature is to critically analyse and synthesise current scientific reports on the prevention, diagnosis and treatment of urinary incontinence in women. The paper presents the most important issues concerning urinary incontinence in women, with particular emphasis on its aetiology, clinical presentation, diagnosis, treatment and prevention. Stress, urge and mixed urinary incontinence are discussed, as well as other, less common forms of this condition in women. The main risk factors are presented, including age, pregnancy and childbirth, excess body weight, the menopause, pelvic floor muscle weakness, chronic cough, constipation, smoking, lack of physical activity, neurological disorders and previous surgical procedures in the lower pelvis. The importance of the medical history, physical and gynaecological examinations, a voiding diary, urinalysis, ultrasound, uroflowmetry, provocation tests and, where indicated, urodynamic studies is highlighted. Conservative management was discussed, encompassing education, lifestyle modification, pelvic floor muscle training and bladder training, as well as pharmacotherapy, minimally invasive methods and surgical treatment. It was emphasised that early recognition of symptoms and individualised management can reduce the severity of symptoms and improve quality of life. Preventive measures should focus on strengthening the pelvic floor muscles, maintaining a healthy body weight, preventing constipation and chronic cough, and overcoming the barriers that prevent women from reporting their symptoms to healthcare professionals. Symptoms can vary in severity – from occasional leakage of small amounts of urine to frequent episodes requiring the use of absorbent products, which limit activity and contribute to social withdrawal. The choice of treatment should take into account the type and severity of symptoms, co-morbidities, previous management, the patient's expectations and her ability to actively participate in treatment, which is crucial for minimising long-term health, social and emotional consequences.

**Keywords:** diagnosis, women, treatment, urinary incontinence, prevention

## Introduction

Urinary incontinence is a common health problem among women (Aoki et al., 2017). Although it does not pose a direct threat to life, it can significantly impair functioning in daily life, mental well-being, social and occupational activity, and family and partner relationships. The condition is often accompanied by

feelings of shame, embarrassment and a sense of loss of control over one's own body. For this reason, many women do not report their symptoms to healthcare professionals, viewing them as a natural consequence of ageing, previous childbirth or hormonal changes (Pizzol et al., 2021). The condition can occur at

<sup>1</sup> Article in Polish language: [https://stowarzyszeniefidesetratio.pl/fer/67p\\_Kutk.pdf](https://stowarzyszeniefidesetratio.pl/fer/67p_Kutk.pdf)

any age, and the risk increases with, amongst other factors, advancing age, the number of births, excess body weight and weakness of the pelvic floor muscles (Aoki et al., 2017; Pizzol et al., 2021).

The clinical presentation of urinary incontinence varies: from occasional leakage of small amounts of urine to frequent episodes that significantly hinder the performance of daily activities (Lee et al., 2021). The condition may limit physical activity, encourage avoidance of social contact, hinder work and lower self-esteem (Pizzol et al., 2021). Its significance for women extends beyond the physical dimension (Połocka-Molińska et al., 2017). Women's fear of unpleasant odours, soiling their underwear or clothing, and a lack of access to a toilet may lead to them leaving the house less often, giving up social activities and experiencing reduced life satisfaction (Stroppa et al., 2025). Urinary incontinence in women should therefore be regarded as a medical, social and emotional problem (Lee et al., 2021; Pizzol et al., 2021; Połocka-Molińska et al., 2017; Stroppa et al., 2025).

The aim of this literature review is to critically analyse and synthesise current scientific reports on the prevention, diagnosis and treatment of urinary incontinence in women. To provide an overview of urinary incontinence as an ongoing medical issue in the form of a concise, analytical summary of the most relevant information.

A traditional, i.e. non-systematic, review of the available literature was employed as a flexible method of source selection. No strictly defined, reproducible protocol or algorithm was used, and not all available databases were searched. Publications were searched only in the following databases: PubMed, Scopus and the Cochrane Library. The search was based on the following set of keywords: woman, urinary incontinence, diagnosis, prevention, treatment. The analysis focused on sources published in English and Polish over the last ten years (2016–2026).

An initial selection of articles was made on the basis of their titles and abstracts, after which the full text of the publications was assessed in terms of direct thematic relevance and clinical significance for the group of women with urinary incontinence. The aim of this process was to focus on the most up-to-date

and reliable evidence concerning the prevention, diagnosis and treatment of urinary incontinence in women.

## **1. Definition and classification of urinary incontinence**

Urinary incontinence is defined as any involuntary leakage of urine. This symptom may occur in women in various situations and vary in severity: from isolated, minor episodes to a condition requiring the regular use of pads or other absorbent products (Hu & Pierre, 2019).

Urinary incontinence is not a physiological consequence of ageing in women, nor is it an inevitable consequence of childbirth. It is a condition requiring the selection of optimal diagnostic and therapeutic management (Hu & Pierre, 2019). Maintaining continence requires the proper, coordinated functioning of structures within the genitourinary system, such as the bladder, urethra, pelvic floor muscles, urethral sphincters and the nervous system. Dysfunction of any of these components can disrupt the mechanism of urine retention in women and lead to uncontrolled leakage (Aoki et al., 2017; Hu & Pierre, 2019).

The most commonly diagnosed types of urinary incontinence in women are stress, urge and mixed incontinence. Each of these forms has a different mechanism and course, and requires an individualised diagnostic and therapeutic approach (Hu & Pierre, 2019).

## **2. Epidemiology of urinary incontinence in women**

Urinary incontinence in women is a common condition; however, the scale of the problem may be underestimated, as many women do not report their symptoms to a doctor, midwife or nurse. This is often due to embarrassment or the belief that the symptoms are a normal consequence of ageing, pregnancy or childbirth. It is estimated that around 10 per cent of adult women experience at least one episode of urine leakage per week, whilst sporadic incidents

may affect between 25 per cent and 45 per cent of them (Cardozo et al., 2023). The risk increases with age, but the problem can also occur in younger women, particularly those who have given birth, are overweight, have weakened pelvic floor muscles, or engage in strenuous physical activity. In later life, hormonal changes, chronic diseases, medication use and weakening of the structures supporting the pelvic organs also play a role (Cardozo et al., 2023).

The higher prevalence of urinary incontinence in women compared with men is associated with differences in the anatomy of the genitourinary system, a shorter urethra, weakening of the pelvic floor muscles following previous pregnancies and childbirth, and hormonal changes during the perimenopausal period (Aoki et al., 2017; Cardozo et al., 2023; Corrado et al., 2020).

### **3. Risk factors for urinary incontinence**

The risk of developing urinary incontinence in women is multifactorial (Aoki et al., 2017). It is influenced by anatomical, hormonal, neurological, metabolic and environmental factors, as well as age, general health, the course of pregnancies and childbirth, lifestyle and comorbidities (Aoki et al., 2017). A key mechanism contributing to urinary incontinence is the weakening of the pelvic floor structures (Aoki et al., 2017). The pelvic floor muscles support the bladder, urethra, uterus and rectum, and play a role in urinary continence. Their dysfunction can disrupt urethral stabilisation and impair urinary control. Disorders of the supporting tissues, peripheral nerves, bladder and urethra, as well as hormonal changes, may also play a role in the pathogenesis (Aoki et al., 2017; Cardozo et al., 2023).

Multiple pregnancies and births are significant risk factors for urinary incontinence in women. During pregnancy, the enlarging uterus, together with the developing foetus, placenta and amniotic fluid, increases the load on the pelvic floor, which contributes to the stretching of muscles and ligaments (Dai et al., 2023). The risk of damage to the structures responsible for urinary continence may also increase

as a result of subsequent births, the birth of a large baby, or significant stretching of the tissues during labour (Dai et al., 2023; Wang et al., 2020).

Age is another significant risk factor (Batmani et al., 2021). As the body ages, there is, amongst other things, a weakening of the muscles, a reduction in tissue elasticity, a higher incidence of chronic diseases and a decline in the functioning of the nervous system, all of which may contribute to the onset of symptoms (Batmani et al., 2021; Troko et al., 2016). The perimenopausal period, which is accompanied by a reduction in oestrogen levels, is also significant. A deficiency of these hormones may adversely affect the tone of the musculotendinous structures of the urogenital diaphragm, weakening support for the urethra and contributing to urinary incontinence (Sussman et al., 2020).

Excess body weight in women increases the load on the bladder and pelvic floor structures, particularly when adipose tissue accumulates in the abdominal region (Nygaard & Shaw, 2016). An increase in intra-abdominal pressure intensifies the pressure on the bladder and the vesicourethral junction, which may increase the frequency of episodes of stress urinary incontinence, e.g. when coughing, sneezing, laughing, standing up, walking upstairs or during physical activity (Nygaard & Shaw, 2016; Steenstrup et al., 2018).

The risk of urinary incontinence in women may also be associated with inadequate or excessive physical exertion (Pierce et al., 2016). Of particular significance are activities that cause a sudden increase in intra-abdominal pressure, such as lifting heavy loads, jumping on a trampoline or intense exercises that place strain on the pelvic floor (Syeda & Pandit, 2024). A lack of physical activity in women is also detrimental; therefore, both a sedentary lifestyle and excessive physical strain can disrupt the normal functioning of the pelvic floor muscles (Pierce et al., 2016; Syeda & Pandit, 2024; Teixeira et al., 2018).

Modifiable risk factors for this condition in women also include chronic cough, respiratory diseases, constipation and smoking. A persistent cough increases intra-abdominal pressure, thereby placing strain on the bladder and the pelvic floor muscles. Smoking may further exacerbate this mechanism, as it promotes

chronic coughing. Constipation and straining during bowel movements also increase pressure on the structures of the lesser pelvis (Aoki et al., 2017).

Symptoms of urinary incontinence in women may also occur in the context of neurological diseases and cognitive impairments. This includes, amongst others, multiple sclerosis, Parkinson's disease, dementia syndromes, as well as conditions following a stroke, brain injury or spinal cord injury. Disorders of the nervous system can disrupt the transmission of signals between the brain, the bladder and the pelvic floor muscles, making it difficult to consciously control urination (Sussman et al., 2020).

Risk factors for this condition also include previous surgery in the lower pelvic region and cancer treatment. Gynaecological operations and other medical procedures performed in this area can damage or weaken the pelvic floor muscles and the urethral sphincter. Chemotherapy and radiotherapy, in turn, can affect kidney and bladder function, increasing the risk of urinary dysfunction (Kobashi et al., 2023).

#### **4. Types and symptoms of urinary incontinence**

The clinical presentation of urinary incontinence in women depends primarily on the type of disorder, its cause and its severity. In clinical practice, three main forms are most commonly distinguished (Mostafaei et al., 2020; Rostami et al., 2025; Sussman et al., 2020):

- stress urinary incontinence,
- urge urinary incontinence,
- mixed urinary incontinence.

Stress urinary incontinence is the most common form of this condition in women (Petca et al., 2025). It involves involuntary leakage of urine in situations that increase intra-abdominal pressure, such as coughing, sneezing, laughing, brisk walking, running, lifting heavy objects, climbing stairs or physical exercise (Rada et al., 2022). A characteristic feature is the absence of a sudden, strong urge to urinate preceding the leakage (Petca et al., 2025;

Rada et al., 2022; Sussman et al., 2020). The severity of stress urinary incontinence can be described in three grades:

- Grade I – leakage occurs only with a sudden and significant increase in intra-abdominal pressure, e.g., during coughing, sneezing, laughing or intense physical exertion. Symptoms are usually mild and sporadic.
- Grade II – urine leakage occurs during moderate physical activity or whilst carrying out typical everyday activities, such as walking briskly, running, climbing stairs, bending over or lifting heavier objects.
- Grade III – urine leakage occurs even with minimal exertion, a change in body position, walking calmly or standing; in severe cases, it may also occur at rest, e.g. whilst sitting or lying down (Sussman et al., 2020).

Urge incontinence is characterised by a sudden, uncontrollable urge to urinate (Monteiro et al., 2018). The urge may be so strong that the patient is unable to reach the toilet in time. This form is associated with overactive bladder syndrome, in which urgent urges, with or without urinary incontinence, may be accompanied by daytime frequency and nocturia (Trapani et al., 2024). The need to constantly factor in access to a toilet when planning one's day may limit women's social, professional and leisure activities (Monteiro et al., 2018; Trapani et al., 2024).

Mixed urinary incontinence in women combines features of both stress and urge incontinence (Mostafaei et al., 2020). Urine leakage may occur both during activities that increase intra-abdominal pressure and as a result of a sudden, strong urge to urinate (Rostami et al., 2025). The co-occurrence of these two mechanisms means that this form can be particularly distressing for women (Mostafaei et al., 2020; Rostami et al., 2025; Sussman et al., 2020).

In addition to the three main forms of this condition, other types of urinary incontinence are also recognised, including:

- overflow incontinence,
- non-sphincteric urinary incontinence,

- bedwetting,
- continuous urinary incontinence,
- urinary incontinence associated with a change in body position,
- urinary incontinence associated with sexual activity,
- hidden (masked) urinary incontinence.

This means that the clinical presentation need not be limited to urine leakage associated solely with exertion or a sudden urge (Sussman et al., 2020). The severity of symptoms can vary greatly (Abebe et al., 2024). Some women experience only occasional leakage when coughing, sneezing or exerting themselves, whilst for others the episodes are frequent and involve greater urine loss (Frigerio et al., 2022). In such cases, it may be necessary to use absorbent products, change underwear frequently and restrict daily activities (Abebe et al., 2024; Frigerio et al., 2022; Rada et al., 2022).

## **5. Diagnosis of urinary incontinence**

The aim of diagnosing urinary incontinence in women is to determine the type of disorder, the severity of symptoms and the likely causes (Kobashi et al., 2023). This is crucial for the optimal selection of treatment, as similar symptoms may result from various medical conditions (Sussman et al., 2020). A properly conducted diagnostic assessment enables the differentiation between stress, urge and mixed urinary incontinence, as well as other voiding disorders (Kobashi et al., 2023; Sussman et al., 2020). The diagnostic process usually begins with a detailed medical history taken from the woman (Kobashi et al., 2023). Firstly, it is necessary to establish when the first symptoms appeared, the frequency of leakage episodes and the circumstances in which they occur (Sussman et al., 2020). It is important to distinguish whether urine leakage occurs whilst coughing, sneezing, laughing, exerting oneself or changing body position, and whether it is preceded by a sudden, difficult-to-control urge (Sussman et al., 2020). This information allows for a preliminary

determination of the mechanism underlying the condition (Kobashi et al., 2023; Sussman et al., 2020). The medical history should cover the following points in particular (Kobashi et al., 2023; Sussman et al., 2020):

- the duration of symptoms,
- the frequency of episodes of involuntary urine leakage,
- circumstances in which leakage occurs, e.g. coughing, sneezing, laughing, physical exertion or a change in body position,
- the occurrence of a sudden, difficult-to-control urge preceding leakage,
- the number of micturitions during the day,
- the occurrence of night-time urination,
- the presence of a sudden urge to urinate,
- a feeling of incomplete bladder emptying,
- pain, a burning sensation during urination or haematuria,
- recurrent urinary tract infections,
- use of panty liners, sanitary towels or other absorbent products,
- the estimated amount of urine lost,
- comorbidities,
- medicines taken regularly,
- any allergies,
- smoking and alcohol consumption,
- level of physical activity,
- participation in sport and the type of sport,
- constipation,
- number of previous pregnancies and births,
- mode of delivery,
- history of obstetric complications,
- previous gynaecological or urological operations,
- previous procedures involving the lesser pelvis.

The medical history is supplemented by a physical examination, including a gynaecological examination (Kobashi et al., 2023). This allows for an assessment of the condition of the reproductive organs, the identification of any prolapse of the vaginal walls or the uterus, an assessment of pelvic floor muscle tone, and the detection of changes within the genitourinary system (Sussman et al., 2020). This is particularly important because urinary incontinence

in women may co-occur with pelvic floor weakness, hormonal changes, previous childbirths and prior surgery involving the reproductive organs (Kobashi et al., 2023; Sussman et al., 2020).

A voiding diary is a valuable diagnostic tool. In it, the patient records fluid intake, the volume of urine passed, the number of daytime and night-time voids, episodes of urinary incontinence, and the occurrence of urinary urgency. The record may also include the circumstances of leakage, body position, activity being performed, and absorbent products used. To obtain reliable data, the diary should be kept for at least three days. It facilitates the assessment of bladder function in everyday conditions, the diagnosis of frequent urination, nocturia and urinary urgency, and the identification of links between a woman's lifestyle and the severity of her symptoms (Sussman et al., 2020).

Additional tests are also used in the diagnostic process. A general urine analysis and urine culture are of fundamental importance, as they help to rule out a urinary tract infection that may cause frequent urination, a burning sensation during urination, pain or a sudden urge to urinate. A general urine analysis may also reveal other abnormalities, including those associated with kidney disease (Sussman et al., 2020).

Ultrasound of the urinary tract enables assessment of the structure of the organs and the detection of anatomical abnormalities. It is also very important to measure the residual urine volume after voiding, which allows an assessment of whether the bladder is emptying properly or whether there is residual urine suggesting other lower urinary tract disorders (Sussman et al., 2020).

Uroflowmetry is a simple, non-invasive test used to assess the manner of urination. The patient urinates into a device that records the flow rate, enabling an assessment of the course of micturition, its rate, and any possible dysfunction of the bladder and urethra. The test is particularly useful when abnormal bladder emptying is suspected (Kobashi et al., 2023; Sussman et al., 2020).

The cough test and the pad test are also used in the assessment of urinary incontinence in women. The cough test involves provoking urine leakage whilst coughing and is particularly useful in diag-

nosing stress urinary incontinence. The pad test, on the other hand, allows the volume of urine lost to be estimated based on the difference in the weight of the pad before and after the test or after performing activities that trigger leakage (Kobashi et al., 2023; Sussman et al., 2020).

Urodynamic testing is a more specialised method for assessing bladder and urethral sphincter function during the filling and emptying phases of the bladder (Kobashi et al., 2023). During the test, a catheter is inserted into the bladder via the urethra, and a second one into the rectum. The bladder is then gradually filled whilst voiding parameters are recorded (Sussman et al., 2020). This enables the assessment of, amongst other things, the volume of urine voided, the flow rate, and the pressure within the bladder and the abdominal cavity. The test is not routinely performed at the start of the diagnostic process; it is considered particularly in cases of ambiguous symptoms, when previous treatment has been ineffective, or prior to planned surgical treatment (Kobashi et al., 2023; Sussman et al., 2020).

## **6. Treatment of urinary incontinence in women**

Treatment in this area should be tailored to the individual, taking into account the type of urinary incontinence, the severity of symptoms, age, general health, comorbidities, previous procedures and the patient's willingness to cooperate (Burton et al., 2022). Initially, the least invasive methods are usually implemented, such as education, lifestyle modification, physiotherapy and behavioural therapy (Dumoulin et al., 2016). Pharmacotherapy, minimally invasive procedures or surgical treatment are considered in cases of insufficient improvement or significantly severe symptoms (Burton et al., 2022; Dumoulin et al., 2016; Liu et al., 2024; Stewart et al., 2017; Todhunter-Brown et al., 2022).

The basis of conservative management is patient education and modification of daily habits that may exacerbate symptoms (Chen et al., 2024). It is recommended to maintain a healthy weight, engage in regular physical activity of appropriate

intensity, prevent constipation, treat urinary tract infections and limit foods and drinks that irritate the bladder (Mantilla Toloza et al., 2024). In the case of overactive bladder symptoms, it may be helpful to reduce the intake of fizzy drinks, citrus fruits, hot spices, chocolate and other foods that exacerbate the urge to urinate (Chen et al., 2024; Mantilla Toloza et al., 2024; Sousa et al., 2024; Todhunter-Brown et al., 2022).

The following measures are of particular importance in conservative management (Chen et al., 2024; Mantilla Toloza et al., 2024; Sousa et al., 2024; Todhunter-Brown et al., 2022):

- maintaining a healthy weight,
- limiting the intake of caffeine and fizzy drinks,
- maintaining proper hydration,
- preventing constipation,
- treating urinary tract infections,
- giving up nicotine and limiting alcohol consumption,
- avoiding excessive heavy lifting,
- regular physical activity tailored to the patient's abilities,
- good bladder and bowel habits.

Pelvic floor muscle training is one of the most important conservative management methods for urinary incontinence in women (Dumoulin et al., 2018). It involves consciously contracting and relaxing the muscles responsible for supporting the pelvic organs and contributing to the mechanism of urinary continence (Hay-Smith et al., 2024). Its aim is to improve resting tone, contraction strength and endurance, and neuromuscular control (Kharaji et al., 2023). When performed systematically and correctly, this training can reduce the symptoms of stress urinary incontinence, particularly those of mild or moderate severity (Paiva et al., 2017). Effectiveness may be greater when exercises are carried out under the supervision of a urogynaecological or urological physiotherapist (Rocha et al., 2018). Physiotherapy also includes education on diet, fluid intake, urinary and bowel habits, physical activity and the impact of stress (Rocha et al., 2018). Depending on individual needs, biofeedback, electrostimulation,

pelvic floor therapy, magnetic stimulation and vibration therapy are also used (Dumoulin et al., 2018; Hay-Smith et al., 2024; Kharaji et al., 2023; Paiva et al., 2017; Rocha et al., 2018).

Bladder training plays an important role in urge incontinence in women and overactive bladder syndrome (Liu et al., 2024). It involves gradually increasing the intervals between successive voids and learning to control sudden urges (Monteiro et al., 2018). The aim is to reduce the frequency of urination, limit episodes of urgency and improve bladder control (Trapani et al., 2024). A voiding diary can facilitate treatment planning (Liu et al., 2024; Monteiro et al., 2018; Trapani et al., 2024).

Pharmacotherapy is primarily used in patients with urge incontinence or overactive bladder syndrome (Liu et al., 2024). Anticholinergic drugs reduce excessive bladder activity; in practice, solifenacin and tolterodine, amongst others, are used (Sussman et al., 2020). They may reduce frequent urination and urinary urgency and improve urinary control, but they are also associated with a risk of adverse effects, such as dry mouth, visual disturbances, gastrointestinal symptoms, headaches, cardiac arrhythmias or urinary retention (Todhunter-Brown et al., 2022). Therefore, the choice of medication and dosage should be tailored to the patient's needs (Liu et al., 2024; Sussman et al., 2020; Todhunter-Brown et al., 2022).

In stress urinary incontinence, pharmacotherapy plays a less significant role than physiotherapy and surgical treatment (Sussman et al., 2020). In perimenopausal women, local vaginal oestrogen therapy may alleviate some of the symptoms associated with atrophic changes in the mucous membranes (Todhunter-Brown et al., 2022). Duloxetine is also sometimes used; whilst it increases the tone of the external urethral sphincter, it usually only reduces the severity of symptoms during treatment and may cause adverse effects (Sussman et al., 2020; Todhunter-Brown et al., 2022).

Minimally invasive methods for the treatment of urinary incontinence are mainly considered when conservative and pharmacological management fail to produce the expected improvement (Burton et al., 2022). In suitably selected patients with neurogenic detrusor overactivity or urge incontinence, botulinum

toxin type A may be used; this reduces excessive detrusor muscle activity and may reduce the number of incontinence episodes (Burton et al., 2022; Sussman et al., 2020; Todhunter-Brown et al., 2022).

Surgical treatment is most commonly considered for women with stress urinary incontinence, particularly when conservative methods do not provide sufficient improvement or when symptoms are significantly severe (Grigoryan et al., 2023). The aim of the procedure is to improve support for the urethra and bladder neck in order to reduce urine leakage in situations that increase intra-abdominal pressure (Imamura et al., 2019). Techniques used include urethral slings, as well as procedures to suspend and stabilise the pelvic floor structures (Javanbakht et al., 2020). The decision to proceed with surgery should be preceded by detailed diagnostic investigations, an assessment of the patient's health, a discussion of the benefits and possible complications, and consideration of alternative treatment options (Grigoryan et al., 2023; Imamura et al., 2019; Javanbakht et al., 2020; Sheng et al., 2022; Wang et al., 2022).

## **7. Prevention of urinary incontinence in women**

Prevention of urinary incontinence in women involves minimising factors that contribute to pelvic floor muscle weakness, bladder overload and impaired urinary control (Janse van Vuuren et al., 2021). It is important to educate women about healthy habits, recognising early symptoms and risk factors such as pregnancy, childbirth, the menopause, being overweight, obesity, constipation, chronic cough and excessive physical exertion (Lawson & Sacks, 2018). An early response to emerging symptoms can reduce their severity and facilitate the implementation of appropriate management (Lawson & Sacks, 2018; Vasconcelos et al., 2019; Wieland et al., 2019; Janse van Vuuren et al., 2021).

Pelvic floor muscle exercises play a particularly important role in prevention (Koomson et al., 2025). They can be used both as part of treatment and as a preventative measure (Moroni et al., 2016).

They should be performed regularly, particularly by women who have given birth, those going through the menopause, and people reporting the first symptoms of pelvic floor muscle weakness or occasional episodes of urinary incontinence (Radzimińska et al., 2018). Regular muscle training improves muscle tone, strength and control, thereby supporting the mechanism of urinary continence (Koomson et al., 2025; Moroni et al., 2016; Radzimińska et al., 2018).

It is also important to maintain a healthy body weight and avoid excessive strain (Alhamoud et al., 2024). Being overweight or obese increases pressure on the bladder and pelvic floor, whilst frequently lifting heavy objects can raise intra-abdominal pressure (Fusco et al., 2017). A similar mechanism is associated with chronic cough and constipation; therefore, treating these conditions and giving up smoking are important preventive measures (Alhamoud et al., 2024; Fusco et al., 2017; Nygaard & Shaw, 2016; Steenstrup et al., 2018; Teixeira et al., 2018).

Daily habits are also important (Janse van Vuuren et al., 2021). One should avoid holding in urine 'just in case', spending long periods on the toilet, and straining excessively during urination and bowel movements (Lawson & Sacks, 2018). A balanced diet, adequate fluid intake, prevention of constipation and limiting foods that may irritate the bladder are recommended (Sussman et al., 2020). Physical activity should be regular, moderate and tailored to the woman's capabilities (Janse van Vuuren et al., 2021; Lawson & Sacks, 2018; Sussman et al., 2020; Todhunter-Brown et al., 2022).

Another aspect of prevention is overcoming feelings of shame and encouraging women to report the first symptoms (Janse van Vuuren et al., 2021). Urinary incontinence is common, but it should not be regarded as an inevitable consequence of a woman's ageing or the number of pregnancies and births she has experienced (Lawson & Sacks, 2018). Early consultation facilitates the diagnosis of the cause of the condition, reduces the severity of symptoms and improves women's quality of life (Janse van Vuuren et al., 2021; Lawson & Sacks, 2018; Rada et al., 2022; Vasconcelos et al., 2019).

## Conclusions

Early diagnosis of the type of urinary incontinence in women and the modifiable risk factors for this condition enables the planning of a personalised, interprofessional diagnostic and therapeutic approach. Well-delivered education, lifestyle modifications, pelvic floor muscle training and bladder training should form the basis of conservative treatment. However, the decision to proceed with pharmacotherapy or invasive treatment requires a thorough diagnostic

process and must take into account the severity of symptoms, co-morbidities and the preferences of the patient herself, and often those of her partner as well. Prevention is of key importance, including strengthening the pelvic floor muscles, maintaining a healthy weight, preventing constipation and chronic cough, and encouraging women to report symptoms early to their midwife and gynaecologist. Urinary incontinence in women is not only a medical problem, but also a personal and social one, which will be the subject of future publications.

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